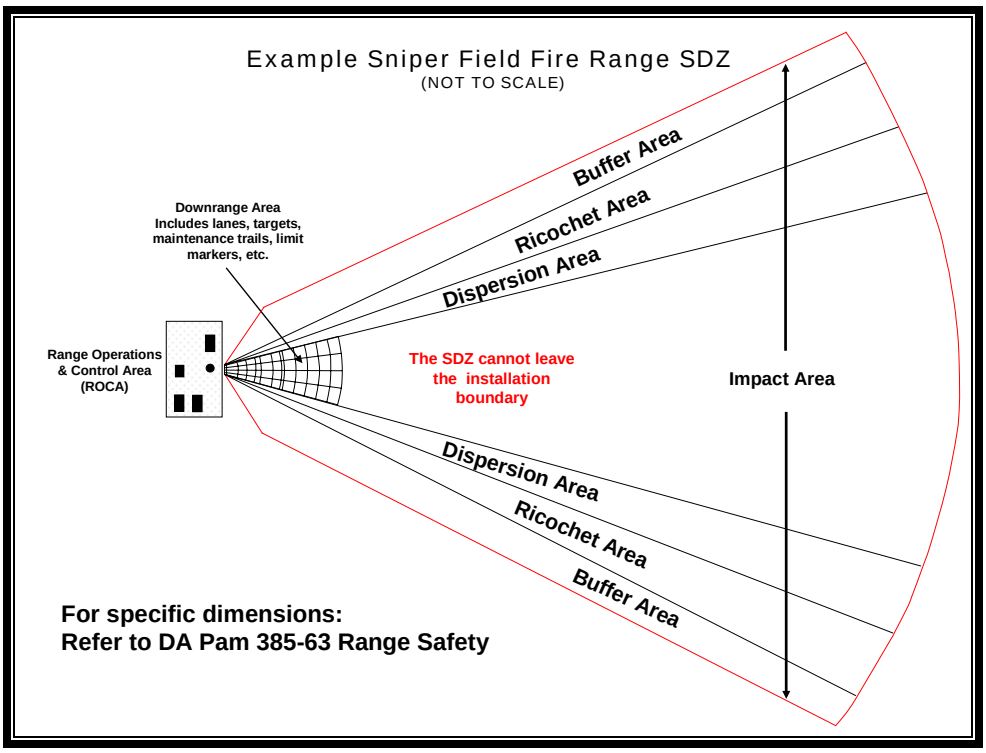
SFF SURFACE DANGER ZONES (SDZ)



Definition: The Surface Danger Zone (SDZ) is a depiction of the mathematically predicted area a projectile will impact upon return to earth, either by direct fire or ricochet. The SDZ is the area extending from a firing point to a distance downrange based on the projectiles fired. This area has specific dimensions for the expected caliber of the weapon(s) being fired so that all projectile fragments will be contained in this area. These dimensions are found in DA PAM 385-63 - Range Safety.

While this area is not considered part of the range design, it is one of the deciding factors as to the location upon which the range facility can be built and the orientation of the lanes and targets. Typically, a composite SDZ is generated to encompass all firing points and the firing of several different caliber weapons. It encompasses all weapons within the largest SDZ footprint. No part of the SDZ may leave the installation property. SDZs from different ranges may overlap, but no SDZ will fall on a part of another range where soldiers are training.

General: The target array on the Sniper Field Fire range extends from 100m to 1000m downrange from the firing line. Each lane of the SFF has a 20 x 20 meter firing position. The sniper may engage targets from anywhere within this firing position. This additional 20 meters behind the firing line adds 20 meters to the length of the SDZ.

The example drawing is based on firing the M24 Sniper rifle with 7.62mm M118 Special ammunition. The hazard distance for this projectile is 5,288m. To this, add the 20m

firing position. The SDZ hazard distance is now 5,308m. Firing the M118 Special creates a hazard distance 4308m beyond the furthest targets.

When using other weapons/ammunitions, refer to DA Pam 385-63 for the specific SDZ dimensions.

> Note: For proper handling, transportation, and storage of ammunitions and explosives please refer to DA Pam 385-64 Ammunition and Explosives Safety Standards.

Deviations: In some circumstances, installations may pursue a deviation for some SDZ criteria and use an adjusted SDZ. This is solely an installation decision and is based on having mitigating factors, such as a mountain to block projectile travel. If truncating the SDZ is necessary to the success of the project, the designer may consider adding baffles to the range. Properly designed and constructed baffles will limit the range of fire and the area the projectile travels. Contact the RTLP MCX for details on baffle design.